

Serial No. 09/875,659  
February 17, 2004  
Reply to the Office Action dated November 18, 2003  
Page 8 of 12

### REMARKS/ARGUMENTS

Claims 2-21 are pending in this application. By this Amendment, Applicants AMEND claim 2, 3, 4, and 6 and CANCEL claim 1 and ADD claims 8-21.

The Examiner objected to the Abstract of the Disclosure for allegedly not being directed to the claimed invention. Applicants have amended the Abstract of the Disclosure to correct the minor informalities noted by the Examiner. Accordingly, Applicants respectfully request reconsideration and withdrawal of the objection to the Abstract of the Disclosure.

Claims 1-7 were rejected under 35 U.S.C. § 112, second paragraph as allegedly being indefinite.

With respect to claim 1, Applicants have canceled claim 1 and have amended claim 2 to recite the features of claim 1. The Examiner is reminded that inherent components of elements recited have antecedent basis in the recitation of the components themselves. For example, the limitation "the outer surface of said sphere" would not require an antecedent recitation that the sphere has an outer surface. MPEP § 2173.05(e). Thus, Applicants respectfully submit that the feature of "contraction ratio" has antecedent basis in the recitations "ceramic material" and "conductive paste" because the "contraction ratio" is an inherent property of the "ceramic material" and the "conductive paste."

With respect to claim 2, Applicants respectfully submit the features of "length L" and "width t" have antecedent bases in the recitations "wedge" and "internal electrode," respectively, because the "length L" and the "width t" are inherent components of the "wedge" and the "internal electrode," respectively. Claim 2 has been amended to correct the other minor informalities noted by the Examiner. Claim 3 has been amended to correct the minor informalities noted by the Examiner.

Accordingly, Applicants respectfully request reconsideration and withdrawal of the rejection of claims 1-7 under 35 U.S.C. § 112, second paragraph.

Claims 1 and 6 were rejected under 35 U.S.C. § 103(a) as being unpatentable

Serial No. 09/875,659  
February 17, 2004  
Reply to the Office Action dated November 18, 2003  
Page 9 of 12

over JP 7-142904, in view of Makihara et al. ("Multifunctional Ceramic Substrate and Packages for Telecommunication Applications", ISHM'94 Proceedings). Claim 2 was rejected under 35 U.S.C. § 103(a) as being unpatentable over JP 7-142904 in view of Makihara et al., and further in view of Kato et al. ("Application of Low Temperature Fired Multilayered Substrates to High Frequency, ISHM'92 Proceedings). Claims 3-5 and 7 were rejected under 35 U.S.C. § 103(a) as being unpatentable over JP 7-142904 in view of Makihara et al., and further in view of Ueno et al. (U.S. 5,166,859). Applicants have canceled claim 1. Applicants respectfully traverse the rejections of claims 2-7.

Claim 2 has been amended to recite:

"A method for producing an electronic part having a plurality of internal electrodes, said method comprising:  
    laminating a plurality of ceramic green sheets one on top of the other, at least some of the ceramic green sheets having conductive paste on a surface thereof such that the conductive paste is located between two adjacent ceramic green sheets, to form a laminated product; and  
    baking the laminated product to obtain the electronic part, the contraction ratio of the ceramic material forming the ceramic green sheet being greater than the contraction ratio of the conductive paste; wherein  
    **the ceramic material and the conductive paste are selected to have contraction ratios such that a lateral edge of at least one of the internal electrodes has a portion which forms a wedge cross-sectional shape during baking; and**  
    the length L of the wedge and the thickness t of the internal electrode at the base of the wedge satisfies the relationship  $L > 2t$ "  
(emphasis added)

Applicants' claim 2 recites the feature of "the ceramic material and the conductive paste are selected to have contraction ratios such that a lateral edge of at least one of the internal electrodes has a portion which forms a wedge cross-sectional shape during baking." With the improved steps and features of claim 2, Applicants have been able to provide a method for producing an electronic part which effectively minimizes delamination and the inter-layer peel-off phenomenon (see, for example, the first paragraph on page 4 of the Specification).

Serial No. 09/875,659  
February 17, 2004  
Reply to the Office Action dated November 18, 2003  
Page 10 of 12

Applicants have amended claim 2 to recite the feature of "the ceramic material and the conductive paste are selected to have contraction ratios such that a lateral edge of at least one of the internal electrodes has a portion which forms a wedge cross-sectional shape during baking." Applicants agree with the Examiner's statement in paragraph no. 9 on page 5 of the outstanding Office Action that neither JP 7-142904 nor Makihara et al. teaches or suggests the feature of "the internal electrodes have a wedge-like cross-sectional shape." Thus, neither JP 7-142904 nor Makihara et al. teaches or suggests the feature of "the ceramic material and the conductive paste are selected to have contraction ratios such that a lateral edge of at least one of the internal electrodes forms a wedge cross-sectional shape during baking" as recited in Applicants' claim 2.

The Examiner has relied upon Kato et al. to allegedly teach the feature of "the internal electrodes have a wedge-like cross-sectional shape." However, Kato et al. clearly fails to teach or suggest the selection of any materials based on their contraction ratios and, certainly, fails to teach or suggest selecting the ceramic material and the conductive past to have contraction ratios such that a portion of at least one of the electrodes forms a wedge cross-sectional shape during baking as recited in Applicants' claim 2. Thus, Kato et al. fails to teach or suggest the feature of "the ceramic material and the conductive paste are selected to have contraction ratios such that a lateral edge of at least one of the internal electrodes has a portion which forms a wedge cross-sectional shape during baking" as recited in Applicants' claim 2.

Accordingly, Applicants respectfully request reconsideration and withdrawal of the rejection of claim 2 under 35 U.S.C. § 103(a) as being unpatentable over JP 7-142904 in view of Makihara et al., and further in view of Kato et al.

The Examiner has relied upon Ueno et al. to cure various deficiencies in the combination of JP 7-142904 and Makihara et al. However, Ueno et al. clearly fails to teach or suggest the feature of "the ceramic material and the conductive paste are selected to have contraction ratios such that a lateral edge of at least one of the internal

Serial No. 09/875,659  
February 17, 2004  
Reply to the Office Action dated November 18, 2003  
Page 11 of 12

electrodes has a portion which forms a wedge cross-sectional shape during baking" as recited in Applicants' claim 2.

Applicants have added claims 8 and 15. Applicants respectfully submit that none of the prior of record teaches or suggests the feature of "the plurality of ceramic green sheets and the conductive paste are selected such that the contraction ratio of the plurality of ceramic green sheets during baking is larger than the contraction ratio of the conductive paste during baking such that during baking the ceramic green sheets will move toward the tip of the conductive paste which is burned to form a portion of the plurality of internal electrodes in a wedge cross-sectional shape" recited in Applicants' claims 8 and 15.

Accordingly, Applicants respectfully submit that none of the prior art of record, applied alone or in combination, teaches or suggests the unique combination and arrangement of elements recited in claims 2, 8, and 15 of the present application. Claims 3-7 depend upon claim 1 and are therefore allowable for at least the reasons that claim 1 is allowable. Claims 9-14 depend upon claim 8 and are therefore allowable for at least the reasons that claim 8 is allowable. Claims 16-21 depend upon claim 15 and are therefore allowable for at least the reasons that claim 15 is allowable.

In view of the foregoing amendments and remarks, Applicants respectfully submit that this application is in condition for allowance. Favorable consideration and prompt allowance are solicited.

Serial No. 09/875,659  
February 17, 2004  
Reply to the Office Action dated November 18, 2003  
Page 12 of 12

The Commissioner is authorized to charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account No. 50-1353.

Respectfully submitted,

Date: February 17, 2004

  
Attorneys for Applicants

Joseph R. Keating  
Registration No. 37,368

Christopher A. Bennett  
Registration No. 46,710

**KEATING & BENNETT LLP**  
10400 Eaton Place, Suite 312  
Fairfax, VA 22030  
Telephone: (703) 385-5200  
Facsimile: (703) 385-5080